RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/539,093_

Source: _PCT_

Date Processed by STIC: _4/11/06_

ENTERED

RAW SEQUENCE LISTING   DATE: 04/11/2006
PATENT APPLICATION: US/10/539,093   TIME: 12:33:16

Input Set : E:\2394 Pr.ST25.txt
Output Set: N:\CRF4\04112006\J539093.raw

```
   3 <110> APPLICANT: Alcon, Inc.
   4        Yanni, John M.
   5        Gamache, Daniel A.
   6        Miller, Steven T.
   8 <120> TITLE OF INVENTION: Treatment of Dry Eye in Postmenopausal Women by Restoring
   9        15-lipoxygenase Activity to Ocular Surface Cells
  11 <130> FILE REFERENCE: 2394 US
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/539,093
C--> 14 <141> CURRENT FILING DATE: 2005-06-15
  16 <150> PRIOR APPLICATION NUMBER: US 60/435,988
  17 <151> PRIOR FILING DATE: 2002-12-20
  19 <160> NUMBER OF SEQ ID NOS: 10
  21 <170> SOFTWARE: PatentIn version 3.3
  23 <210> SEQ ID NO: 1
  24 <211> LENGTH: 2671
  25 <212> TYPE: DNA
  26 <213> ORGANISM: homo sapiens
  28 <400> SEQUENCE: 1
  29 aagatgggtc tctaccgcat ccgcgtgtcc actggggcct cgctctatgc cggttccaac      60
  31 aaccaggtgc agctgtggct ggtcggccag cacggggagg cggcgctcgg gaagcgactg     120
  33 tggcccgcac ggggcaagga gacagaactc aaggtggaag taccggagta tctggggccg     180
  35 ctgctgtttg tgaaactgcg caaacggcac ctccttaagg acgacgcctg gttctgcaac     240
  37 tggatctctg tgcagggccc cggagccggg gacgaggtca ggttcccttg ttaccgctgg     300
  39 gtggagggca acggcgtcct gagcctgcct gaaggcaccg gccgcactgt gggcgaggac     360
  41 cctcagggcc tgttccagaa acaccgggaa gaagagctgg aagagagaag gaagttgtac     420
  43 cggtggggaa actggaagga cgggttaatt ctgaatatgg ctggggccaa actatatgac     480
  45 ctccctgtgg atgagcgatt tctggaagac aagagagttg actttgaggt ttcgctggcc     540
  47 aaggggctgg ccgacctcgc tatcaaagac tctctaaatg ttctgacttg ctggaaggat     600
  49 ctagatgact tcaaccggat tttctggtgt ggtcagagca agctggctga gcgcgtgcgg     660
  51 gactcctgga aggaagatgc cttatttggg taccagtttc ttaatggcgc caaccccgtg     720
  53 gtgctgaggc gctctgctca ccttcctgct cgcctagtgt tccctccagg catggaggaa     780
  55 ctgcaggccc agctggagaa ggagctggag ggaggcacac tgttcgaagc tgacttctcc     840
  57 ctgctggatg ggatcaaggc caacgtcatt ctctgtagcc agcagcacct ggctgcccct     900
  59 ctagtcatgc tgaaattgca gcctgatggg aaactcttgc ccatggtcat ccagctccag     960
  61 ctgccccgca caggatcccc accacctccc cttttcttgc ctacggatcc cccaatggcc    1020
  63 tggcttctgg ccaaatgctg ggtgcgcagc tctgacttcc agctccatga gctgcagtct    1080
  65 catcttctga ggggacactt gatggctgag gtcattgttg tggccaccat gaggtgcctg    1140
  67 ccgtcgatac atcctatctt caagcttata attccccacc tgcgatacac cctggaaatt    1200
  69 aacgtccggg ccaggactgg gctggtctct gacatgggaa ttttcgacca gataatgagc    1260
  71 actggtgggg gaggccacgt gcagctgctc aagcaagctg gagccttcct aacctacagc    1320
  73 tccttctgtc ccctgatga cttggccgac cggggggctcc tgggagtgaa gtcttccttc    1380
  75 tatgcccaag atgcgctgcg gctctgggaa atcatctatc ggtatgtgga aggaatcgtg    1440
  77 agtctccact ataagacaga cgtggctgtg aaagacgacc cagagctgca gacctggtgt    1500
```

RAW SEQUENCE LISTING   DATE: 04/11/2006
PATENT APPLICATION: US/10/539,093   TIME: 12:33:16

Input Set : E:\2394 Pr.ST25.txt
Output Set: N:\CRF4\04112006\J539093.raw

```
 79 cgagagatca ctgaaatcgg gctgcaaggg gcccaggacc gagggtttcc tgtctcttta   1560
 81 caggctcggg accaggtttg ccactttgtc accatgtgta tcttcacctg caccggccaa   1620
 83 cacgcctctg tgcacctggg ccagctggac tggtactctt gggtgcctaa tgcaccctgc   1680
 85 acgatgcggc tgccccgcc aaccaccaag gatgcaacgc tggagacagt gatggcgaca    1740
 87 ctgcccaact ccaccaggc ttctctccag atgtccatca cttggcagct gggcagacgc    1800
 89 cagcccgtta tggtggctgt gggccagcat gaggaggagt attttcgggg ccctgagcct   1860
 91 aaggctgtgc tgaagaagtt cagggaggag ctggctgccc tggataagga aattgagatc   1920
 93 cggaatgcaa agctggacat gccctacgag tacctgcggc ccagcgtggt ggaaaacagt   1980
 95 gtggccatct aagcgtcgcc accctttggt tatttcagcc cccatcaccc aagccacaag   2040
 97 ctgacccctt cgtggttata gccctgccct cccaagtccc accctcttcc catgtcccac   2100
 99 cctccctaga ggggcacctt ttcatggtct ctgcacccag tgaacacatt ttactctaga   2160
101 ggcatcacct gggaccttac tcctctttcc ttccttcctc ctttcctatc ttccttcctc   2220
103 tctctcttcc tctttcttca ttcagatcta tatggcaaat agccacaatt atataaatca   2280
105 tttcaagact agaatagggg gatataatac atattactcc acaccttta tgaatcaaat    2340
107 atgatttttt tgttgttgtt aagacagagt ctcactttga cacccaggct ggagtgcagt   2400
109 ggtgccatca ccacggctca ctgcagcctc agcgtcctgg gctcaaatga tcctcccacc   2460
111 tcagcctcct gagtagctgg gactacaggc tcatgccatc atgcccagct aatatttttt   2520
113 tatttcgtg gagacggggc ctcactatgt tgcctaggct ggaaatagga ttttgaaccc    2580
115 aaattgagtt taacaataat aaaaagttgt tttacgctaa agatggaaaa gaactaggac   2640
117 tgaactattc taaataaaat attggcaaaa g                                   2671
120 <210> SEQ ID NO: 2
121 <211> LENGTH: 661
122 <212> TYPE: PRT
123 <213> ORGANISM: homo sapiens
125 <400> SEQUENCE: 2
127 Met Gly Leu Tyr Arg Ile Arg Val Ser Thr Gly Ala Ser Leu Tyr Ala
128 1               5                  10                  15
131 Gly Ser Asn Asn Gln Val Gln Leu Trp Leu Val Gly Gln His Gly Glu
132             20                  25                  30
135 Ala Ala Leu Gly Lys Arg Leu Trp Pro Ala Arg Gly Glu Thr Glu Leu
136         35                  40                  45
139 Lys Val Glu Val Pro Glu Tyr Leu Gly Pro Leu Leu Phe Val Lys Leu
140     50                  55                  60
143 Arg Lys Arg His Leu Leu Lys Asp Asp Ala Trp Phe Cys Asn Trp Ile
144 65                  70                  75                  80
147 Ser Val Gln Gly Pro Gly Ala Gly Asp Glu Val Arg Phe Pro Cys Tyr
148             85                  90                  95
151 Arg Trp Val Glu Gly Asn Gly Val Leu Ser Leu Pro Glu Gly Thr Gly
152             100                 105                 110
155 Arg Thr Val Gly Glu Asp Pro Gln Gly Leu Phe Gln Lys His Arg Glu
156         115                 120                 125
159 Glu Glu Leu Glu Glu Arg Arg Lys Leu Tyr Arg Trp Gly Asn Trp Lys
160     130                 135                 140
163 Asp Gly Leu Ile Leu Asn Met Ala Gly Ala Lys Leu Tyr Asp Leu Pro
164 145                 150                 155                 160
167 Val Asp Glu Arg Phe Leu Glu Asp Lys Arg Val Asp Phe Glu Val Ser
168             165                 170                 175
171 Leu Ala Lys Gly Leu Ala Asp Leu Ala Ile Lys Asp Ser Leu Asn Val
172         180                 185                 190
```

```
RAW SEQUENCE LISTING                    DATE: 04/11/2006
PATENT APPLICATION:  US/10/539,093      TIME: 12:33:17

Input Set : E:\2394 Pr.ST25.txt
Output Set: N:\CRF4\04112006\J539093.raw

175 Leu Thr Cys Trp Lys Asp Leu Asp Asp Phe Asn Arg Ile Phe Trp Cys
176         195             200                 205
179 Gly Gln Ser Lys Leu Ala Glu Arg Val Arg Asp Ser Trp Lys Glu Asp
180     210             215                 220
183 Ala Leu Phe Gly Tyr Gln Phe Leu Asn Gly Ala Asn Pro Val Val Leu
184 225             230             235                     240
187 Arg Arg Ser Ala His Leu Pro Ala Arg Leu Val Phe Pro Pro Gly Met
188             245             250                 255
191 Glu Glu Leu Gln Ala Gln Leu Glu Lys Glu Leu Glu Gly Gly Thr Leu
192             260             265                 270
195 Phe Glu Ala Asp Phe Ser Leu Leu Asp Gly Ile Lys Ala Asn Val Ile
196     275             280                 285
199 Leu Cys Ser Gln Gln His Leu Ala Ala Pro Leu Val Met Leu Lys Leu
200     290             295                 300
203 Gln Pro Asp Gly Lys Leu Leu Pro Met Val Ile Gln Leu Gln Leu Pro
204 305             310                 315                 320
207 Arg Thr Gly Ser Pro Pro Pro Pro Leu Phe Leu Pro Thr Asp Pro Pro
208             325                 330                 335
211 Met Ala Trp Leu Leu Ala Lys Cys Trp Val Arg Ser Ser Asp Phe Gln
212         340                 345                 350
215 Leu His Glu Leu Gln Ser His Leu Leu Arg Gly His Leu Met Ala Glu
216         355             360                 365
219 Val Ile Val Val Ala Thr Met Arg Cys Leu Pro Ser Ile His Pro Ile
220     370             375                 380
223 Phe Lys Leu Ile Ile Pro His Leu Arg Tyr Thr Leu Glu Ile Asn Val
224 385             390                 395                     400
227 Arg Ala Arg Thr Gly Leu Val Ser Asp Met Gly Ile Phe Asp Gln Ile
228             405                 410                 415
231 Met Ser Thr Gly Gly Gly Gly His Val Gln Leu Leu Lys Gln Ala Gly
232             420                 425                 430
235 Ala Phe Leu Thr Tyr Ser Ser Phe Cys Pro Pro Asp Asp Leu Ala Asp
236         435             440                 445
239 Arg Gly Leu Leu Gly Val Lys Ser Ser Phe Tyr Ala Gln Asp Ala Leu
240     450             455                 460
243 Arg Leu Trp Glu Ile Ile Tyr Arg Tyr Val Glu Gly Ile Val Ser Leu
244 465             470                 475                     480
247 His Tyr Lys Thr Asp Val Ala Val Lys Asp Asp Pro Glu Leu Gln Thr
248             485             490                 495
251 Trp Cys Arg Glu Ile Thr Glu Ile Gly Leu Gln Gly Ala Gln Asp Arg
252             500             505                 510
255 Gly Phe Pro Val Ser Leu Gln Ala Arg Asp Gln Val Cys His Phe Val
256         515             520                 525
259 Thr Met Cys Ile Phe Thr Cys Thr Gly Gln His Ala Ser Val His Leu
260     530             535                 540
263 Gly Gln Leu Asp Trp Tyr Ser Trp Val Pro Asn Ala Pro Cys Thr Met
264 545             550                 555                     560
267 Arg Leu Pro Pro Pro Thr Thr Lys Asp Ala Thr Leu Glu Thr Val Met
268             565             570                 575
271 Ala Thr Leu Pro Asn Phe His Gln Ala Ser Leu Gln Met Ser Ile Thr
```

RAW SEQUENCE LISTING   DATE: 04/11/2006
PATENT APPLICATION: US/10/539,093   TIME: 12:33:17

Input Set : E:\2394 Pr.ST25.txt
Output Set: N:\CRF4\04112006\J539093.raw

```
272             580                 585                 590
275 Trp Gln Leu Gly Arg Arg Gln Pro Val Met Val Ala Val Gly Gln His
276         595                 600                 605
279 Glu Glu Glu Tyr Phe Ser Gly Pro Glu Pro Lys Ala Val Leu Lys Lys
280     610                 615                 620
283 Phe Arg Glu Glu Leu Ala Ala Leu Asp Lys Glu Ile Glu Ile Arg Asn
284 625                 630                 635                 640
287 Ala Lys Leu Asp Met Pro Tyr Glu Tyr Leu Arg Pro Ser Val Val Glu
288             645                 650                 655
291 Asn Ser Val Ala Ile
292             660
295 <210> SEQ ID NO: 3
296 <211> LENGTH: 3224
297 <212> TYPE: DNA
298 <213> ORGANISM: homo sapiens
300 <400> SEQUENCE: 3
301 cagcttgcag tagagagcta aactggtcag gaggatggcg aaatgcaggg tgagagtatc     60
303 cacggggggaa gcctgtgggg ctggcacatg ggacaaagtg tctgtcagca tcgtgggaac    120
305 ccacggagag aggcccttag tacctctgga ccatctgggc aaggagttca gcgacggtcc    180
307 tgaagaagac ttcgaggtga cgcttcccca ggacgtaggc actgtgctga tgctgcgagt    240
309 ccacaaagca cccccggaag tgtccctccc gcttatgtct ttccgttctg atgcctggtt    300
311 ctgccgctgg ttcgagctgg agtggctacc tggggctgca ctccacttcc cctgttatca    360
313 gtggctggaa ggggcggggg agctggtgct gagagaggga gcagcaaagg tgtcctggca    420
315 agaccatcac cctacactgc aggatcagcg ccagaaggag cttgagtcca ggcagaagat    480
317 gtacagctgg aagacttaca ttgaaggttg gcctcgctgc cttgaccacg agactgtgaa    540
319 agacttggac ctcaacatca agtactctgc gatgaagaat gccaaactct tctttaaagc    600
321 ccactccgcg tatacggagc tgaaagtcaa agggctcctg gaccgcacag gactctggag    660
323 gagtctgagg gagatgagaa ggctgtttaa cttccgcaag actccagcag cagagtatgt    720
325 gtttgcacac tggcaggaag atgccttctt cgcctcccag ttcctaaatg gcatcaaccc    780
327 ggtcctgatt cgccgctgtc acagtctccc aaacaacttc ccggtcactg atgaaatggt    840
329 ggccccagtg ctgggccctg gaaccagtct gcaggctgag ttggagaagg gctccctgtt    900
331 cttggtggat catggcattc tttctggagt ccacaccaac atcctcaatg gaaagcctca    960
333 gttctctgca gccccgatga ccctgttaca ccagagctca gggtccggac ccctgcttcc   1020
335 cattgccatc cagctcaaac agactcccgg gccagacaac cccatcttcc tgcccagcga   1080
337 tgacacgtgg gactggttgc tggccaagac ctgggttcgc aattctgagt tttacatcca   1140
339 tgaggctgtc acacatctgc tgcatgccca tctgattcca gaagtctttg ccttggccac   1200
341 attacgtcag ctgcctaggt gtcaccctct cttcaagcta ttgattcctc acattcggta   1260
343 cacactgcac atcaacacgc ttgcccggga gctgctcgtt gcccctggga agttgataga   1320
345 caagtccaca ggccttggca ctgggggatt ctctgacctg ataaagagaa acatggagca   1380
347 gctgaactac tctgtcctgt gtctccctga agatatccga gcccgaggtg tggaagacat   1440
349 cccaggctac tattaccgag atgatgggat gcagatctgg ggggcaataa agagctttgt   1500
351 ctctgaaata gtcagcatct actatccaag tgacacatcc gtccaagatg accaagagct   1560
353 ccaggcctgg gtgagggaga tcttctctga gggcttcctc ggccgagaaa gctcaggtat   1620
355 gccctccttg ttggataccc gggaagccct ggtccagtat atcaccatgg tgatattcac   1680
357 ctgctcagcc aagcatgcag ctgtcagttc aggccagttc gactcttgtg tttggatgcc   1740
359 caatctgcca cctaccatgc agctaccacc acctacttcc aaaggccagg cccggcctga   1800
361 gagtttcata gccacgctcc cagcagttaa ttcgtcaagt tatcacatca ttgctctctg   1860
363 gctgctaagc gcagaacctg gggaccaaag gcccctgggc cactatccag atgaacactt   1920
365 cacagaggat gcccccccggc gaagcgtggc tgccttccag agaaagctga tccagatctc   1980
```

RAW SEQUENCE LISTING   DATE: 04/11/2006
PATENT APPLICATION: US/10/539,093   TIME: 12:33:17

Input Set : E:\2394 Pr.ST25.txt
Output Set: N:\CRF4\04112006\J539093.raw

```
367 caagggcatc agggagagga accgaggcct ggcactgccc tacacctacc tggatcctcc  2040
369 cctcattgag aacagtgtct ccatctaaca tcttggagaa gacagtcctg tgtgacatat  2100
371 agaactcttg accatgcctc tccaggctaa gtccccgtat gcttctcctg gacaaccaag  2160
373 ccccatctta cacacacaca cacacacaca cacctaataa aatcgaaaca gaaaaaccta  2220
375 aactcccaca gaaggcaaga tctcacacag cagagagcca tccaaatgtt tggagaccct  2280
377 gagcttcagc tctgattaac ggctttgctg gtttgctttg ctttctattc cattaaccat  2340
379 ggacggtaac agaaagcaca gaaccctggt tcactgcaca aagccactga gatctcaccc  2400
381 tcacctgaca caaaggcagc tatcatacag gcttatcagg aacacaggaa tttgtccaat  2460
383 caaagcctac ccactaggtc catcgtgacc tacgacctca cactggcatg ctttagcttt  2520
385 gagaagggat tactggagtc aggtacgaag agaaggacag gacgaaggca tggctccatg  2580
387 tggaagaaca tatctgctct tccagatgac cagggtagct cacagccatg tgtcattcta  2640
389 actccagagg tctctagtgg ccatgaagac tccaggcatt caggggatat accagtagac  2700
391 accaaaatta tacttttta gagagaggaa tgggctggag agatggctca gcggttaaga  2760
393 gcactgactg ctcttccaga gatcctgagt tcaattccca gcaaccacat ggtggctcac  2820
395 aaccatctgt aatgggattc gatgccctct tctggcgtgt ctgaagacag cgacagtgta  2880
397 tgcacatata taaataaat aaatctttaa aaaacaaaac aagagagagg gacatgctac  2940
399 catttctacc tcacttcttc tcaaagccac ccctaaagtg aattgtgaac caggtcccct  3000
401 ttgcagagag ttagaagata ttctcaaacc tctaataccт tcacatctaa aatccatctt  3060
403 cattcgaaaa ttccaatatt ttatatacac tctccagttt ggtgggtgag gggttgtttt  3120
405 ttgtttggtt tggtttggtt ggggttttgt ttttgttttt gattttgttt ttctctggtt  3180
407 cagactccat ggacgttcat taatgtcata aatgagttca ttcc                   3224
410 <210> SEQ ID NO: 4
411 <211> LENGTH: 677
412 <212> TYPE: PRT
413 <213> ORGANISM: homo sapiens
415 <400> SEQUENCE: 4
417 Met Ala Lys Cys Arg Val Arg Val Ser Thr Gly Glu Ala Cys Gly Ala
418 1               5                   10                  15
421 Gly Thr Trp Asp Lys Val Ser Val Ser Ile Val Gly Thr His Gly Glu
422             20                  25                  30
425 Ser Pro Leu Val Pro Leu Asp His Leu Gly Lys Glu Phe Ser Ala Gly
426         35                  40                  45
429 Ala Glu Glu Asp Phe Glu Val Thr Leu Pro Gln Asp Val Gly Thr Val
430     50                  55                  60
433 Leu Met Leu Arg Val His Lys Ala Pro Pro Glu Val Ser Leu Pro Leu
434 65                  70                  75                  80
437 Met Ser Phe Arg Ser Asp Ala Trp Phe Cys Arg Trp Phe Glu Leu Glu
438             85                  90                  95
441 Trp Leu Pro Gly Ala Ala Leu His Phe Pro Cys Tyr Gln Trp Leu Glu
442             100                 105                 110
445 Gly Ala Gly Glu Leu Val Leu Arg Glu Gly Ala Ala Lys Val Ser Trp
446         115                 120                 125
449 Gln Asp His His Pro Thr Leu Gln Asp Gln Arg Gln Lys Glu Leu Glu
450     130                 135                 140
453 Ser Arg Gln Lys Met Tyr Ser Trp Lys Thr Tyr Ile Glu Gly Trp Pro
454 145                 150                 155                 160
457 Arg Cys Leu Asp His Glu Thr Val Lys Asp Leu Asp Leu Asn Ile Lys
458             165                 170                 175
461 Tyr Ser Ala Met Lys Asn Ala Lys Leu Phe Phe Lys Ala His Ser Ala
```

VERIFICATION SUMMARY   DATE: 04/11/2006
PATENT APPLICATION: **US/10/539,093**   TIME: 12:33:18

Input Set : **E:\2394 Pr.ST25.txt**
Output Set: **N:\CRF4\04112006\J539093.raw**

L:13 M:270 C: Current Application Number differs, Replaced Current Application Number
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date